DEPARTMENT OF MECHANICAL ENGINEERING

UNIVERSITY INSTITUTE OF TECHNOLOGY

RGPV,BHOPAL (M.P.)

Portable Garage

Major Project

Submitted in partial fullfillment of the requirement of the degree of Bachelor's of Engineering

Submitted By :-

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Guided By

Mrs. Pratiksha Shrivastava

(Faculty)

CERTIFICATE

This is to certify that Utkarsh Kamerikar, Shashank Singh Parihar, Sachin Gupta, Mihir Shrivastava, Shailesh Marko, Ritwik Jain of 4th year (7th semester) have successfully completed their major project on "Portable Garage" in the partial fulfilment of their bachelor's of engineering in Mechanical Engineering.

Guided by:-

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ACKNOWLEGDEMENT

For the accomplishment of this project work, expression and words run short for us, to convey our sincere gratitude towards many individuals. We are eternally grateful to Prof. A.C Tiwari `inspiration and motivation throughout the project and under whose guidance we were solely able to complete our project. Apart from this, we would also like to express our deepest concern towards Dr. Sudhir Singh Bhadauria of UIT-RGPV, for providing such a studious and healthy atmosphere which encouraged us consistently on focusing upon our task. Never the less, we are greatly obliged to have the faculties of our Mechanical Department with us, who have constantly supported and guided us with new and better ideas.

Finally, we would like to extent our sincere thanks to all those who helped us and were involved in this project knowingly or unknowingly.

CANDIDATE'S DECLARATION

We hereby declare that the Major project work is being presented in the report entitled "Portable Garage" is in the partial fulfilment for the award of the degree of Bachelor of Engineering in Mechanical Engineering. The work has been carried out at University Institute of Technology, Rajiv Gandhi Proudyogiki Vishwavidyalaya (UIT-RGPV), Bhopal and is an authenticated record of our own work carried out under the guidance of Mr. Brijendra Kumar Gond, Faculty at Department of Mechanical Engineering.

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ABSTRACT

In view of the foregoing disadvantages inherent in the known types of vehicle protecting enclosure now present in the prior art, the present invention provides a new portable garage apparatus construction wherein the same can be utilized for providing shelter to a vehicle for people who don't have a garage.

The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new portable garage apparatus which has many of the advantages of the vehicle protecting enclosure mentioned heretofore and many novel features that result in a new portable garage apparatus which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art vehicle protecting enclosure, either alone or in any combination thereof.

To attain this, the present invention generally comprises a portable building structure having a floor, a top wall, side walls, an opening in a back end thereof, and an opening in a front end thereof; and also includes a plurality of doors securely attached to the building structure; and further includes a door opening and closing assembly; and also includes an alarm-sounding assembly for unauthorized entry into said portable building structure.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in

the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

It is therefore an object of the present invention to provide a new portable garage apparatus which has many of the advantages of the vehicle protecting enclosure mentioned heretofore and many novel features that result in a new portable garage apparatus which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art vehicle protecting enclosure, either alone or in any combination thereof.

It is another object of the present invention to provide a new portable garage apparatus which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new portable garage apparatus which is of a durable and reliable construction.

An even further object of the present invention is to provide a new portable garage apparatus which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such portable garage apparatus economically available to the buying public.

Still yet another object of the present invention is to provide a new portable garage apparatus which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

Still another object of the present invention is to provide a new portable garage apparatus for providing shelter to a vehicle for people who don't have a garage.

Yet another object of the present invention is to provide a new portable garage apparatus which includes a portable building structure having a floor, a top wall, side walls, an opening in a back end thereof, and an opening in a front end thereof; and also includes a plurality of doors securely attached to the building structure; and further includes a door opening and closing assembly; and also includes an alarm-sounding assembly for unauthorized entry into said portable building structure.

Still yet another object of the present invention is to provide a new portable garage apparatus that protects one's vehicle from the elements of the environment which could damage the vehicle in some manner.

Even still another object of the present invention is to provide a new portable garage apparatus that can be easily and conveniently set up any where desired by the user.

For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

Table Of Content

CONTENT **Page NO.**

Introduction

According to our present invention I have provided a portable, expandable protective vehicle cover comprising: a base, the base being sized to support a vehicle thereon and having a substantially flat upper surface; a canopy, the canopy being supported by a telescoping frame, the tele scoping frame comprising a plurality of U-shaped ribs extending along outer edges of the base; and a drive structure, the drive structure being positioned along a hori zontal central axis parallel to the flat upper surface within the base, a rotating rod operatively connected to the drive structure, ends of the telescoping frame being pivotally connected to opposing edges on the rotating rod, the drive structure providing power to turn the rotating rod to extend the telescoping frame to open and closed positions thereby opening and closing the canopy and allowing a vehicle positioned on the base to be covered by the canopy.

Another feature of my invention relates to the portable, expandable protective vehicle cover described above, wherein the drive structure comprises: a vehicle engaging arm, the vehicle engaging arm extends upwardly beyond the flat upper surface at a height sufficient to engage a bumper of a vehicle, the vehicle engaging arm being movable laterally across a vertical central axis parallel to the flat upper surface, the vehicle engaging arm being spring loaded, a chain drive connected to the vehicle engaging arm, the chain drive being operatively connected with said rotating rod, the vehicle engaging arm being movable backwards when engaged by a moving vehicle causing the chain drive to turn the rotating rod to extend the telescoping frame to a fully extended position, the vehicle when moved away from the vehicle engaging arm causing the telescoping frame to retract due to the spring loaded forces counter rotating the vehicle engaging arm.

Still another feature of our invention concerns the portable, expandable protective vehicle cover described earlier, wherein the drive structure is powered by an elec trical motor. A further feature of my invention concern the protective cover described earlier, wherein the drive structure is a drive mechanism selected from the group consisting of: a chain drive, a screw drive, and a belt drive.

According to important features of our invention I have also provided a portable. expandable protective vehicle cover as described above, wherein the U-shaped ribs and the canopy open and close in an accordion type fashion and further includes an access opening along a side area on the canopy to allow a person to exit and enter the canopy when the canopy is in a fully extended position.

Yet another feature of our invention I have provided a portable, expandable protective vehicle cover as described above, wherein the canopy is a flexible, lightweight, weather resistant material selected from the group consisting of: canvas, plastic, transparent plastic, nylon, vinyl, rubber and fabric.

According to still further features of our invention I have also provided a portable, expandable protective vehicle cover as described above, wherein said vehicle cover further includes a locking structure, the locking structure allowing a user to lock the canopy when the canopy is in a fully extended position.

Still even further features of my invention concern the portable, expandable protective vehicle canopy described above, wherein the vehicle canopy is sized to accommodate a vehicle selected from the group consisting of: automobiles, motorcycles, pick-up trucks, mini-vans, vans, trucks, and bicycles. Other objects, features and advantages of my invention will become more readily apparent upon reference to the following description when taken in conjunction with the accompanying drawings, which drawings illustrate several embodiments of our invention.

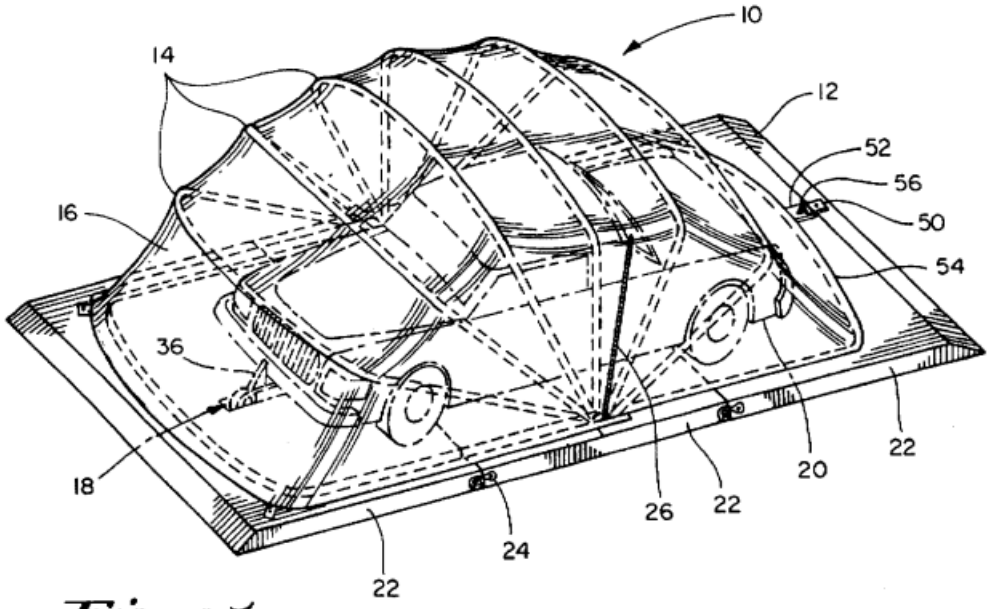
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Fig. 1

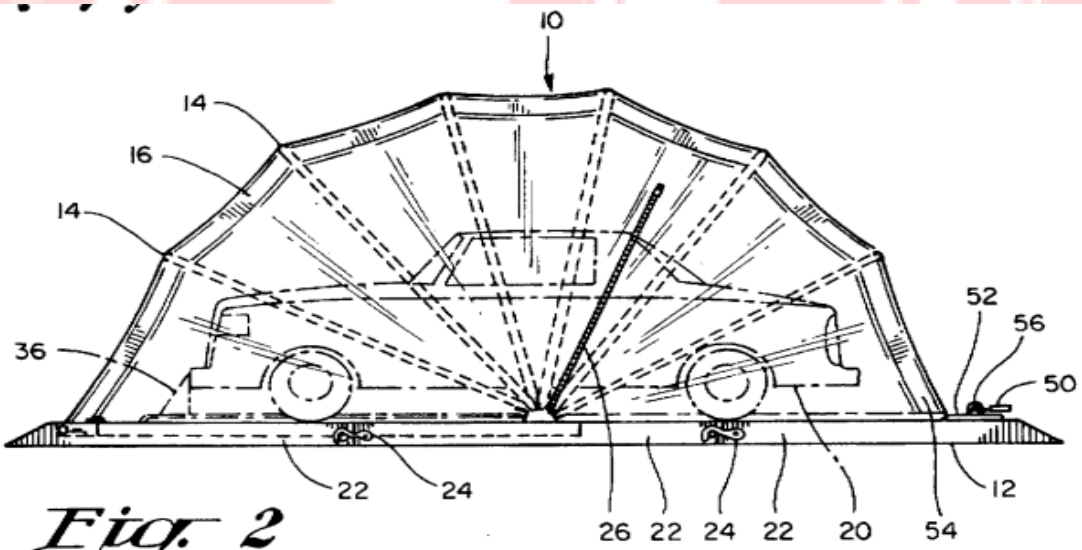
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Fig. 2

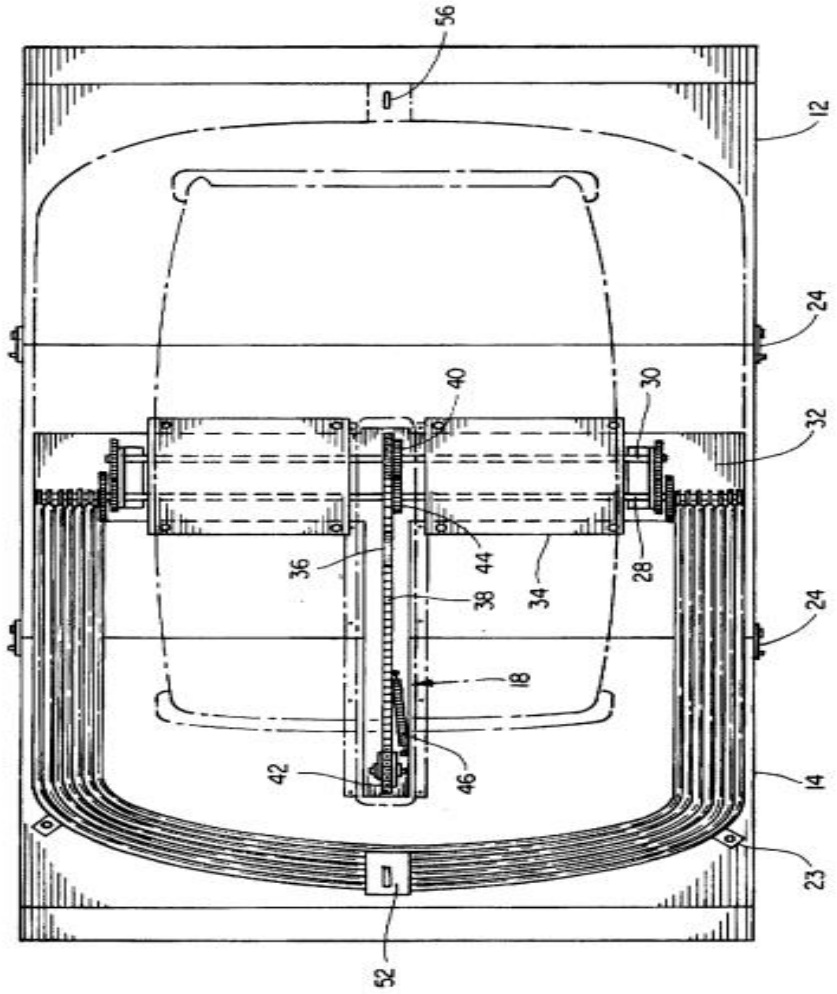

Fig. 3

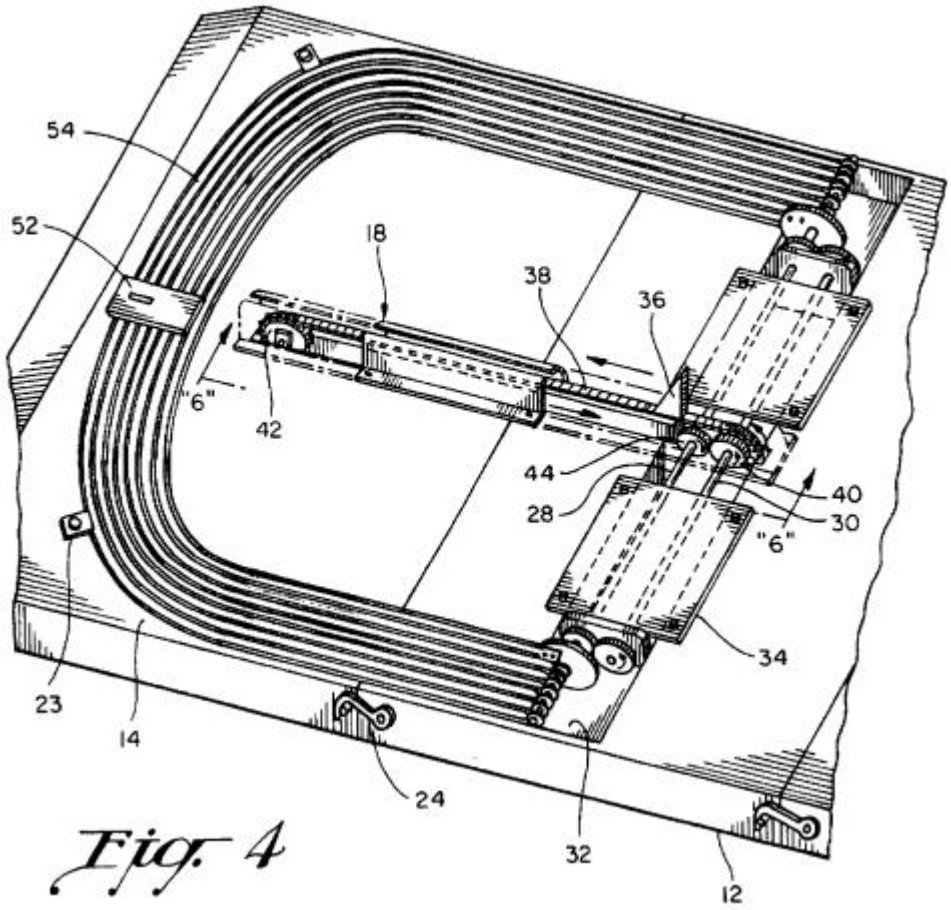

Fig. 4

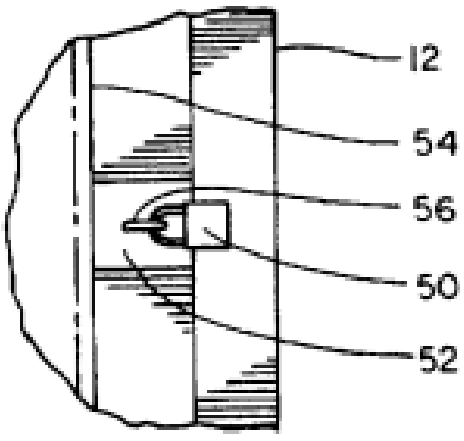

Fig. 5

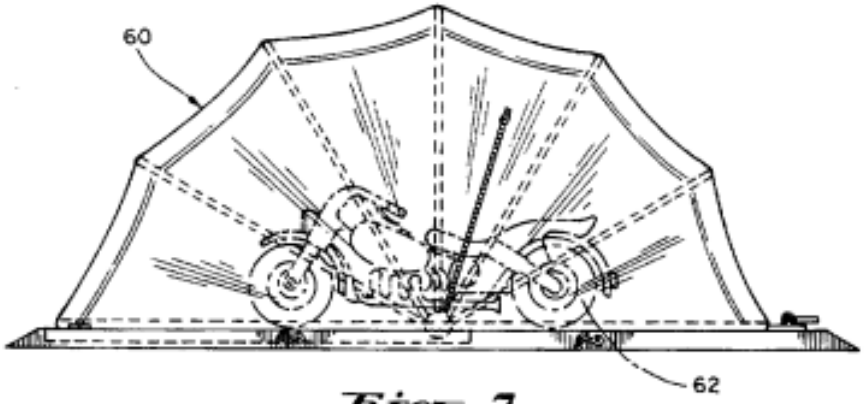

Fig. 7

Fig. 6

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of my portable garage vehicle cover expanded over an automobile

FIG. 2 is a side view of my vehicle cover expanded over an automobile embodying important features of my invention

FIG. 3 is a cut-away top plan view of a drive mechanism used to power my expandable vehicle cover

FIG. 4 is a perspective view partially cut-away of a drive mechanism used to power my portable garage vehicle cover

FIG. 5 is a partial top plan view illustrating a locking device used to lock my portable garage

FIG. 6 is a partial side view of the base of my portable garage taken along the lines 6-6 in FIG. 3 embodying further important features of my invention and;

FIG. 7 is a side view of yet another embodiment of my vehicle cover in a fully expanded position over a motor cycle.

Background

Referring now to the drawings. FIGS. 1 and 2 show my new and improved automobile cover or portable garage 10. The cover 10 comprises a base 12, a telescoping frame structure 14, a canopy 16, and a drive mechanism 18. The base 12 has a flat surface and is sized to support a vehicle20 thereon. The base can be constructed of a variety of mate rials including durable plastic, wood, and metal. It is preferred that the base be made light weighting order to make the portable garage 10 portable and easily movable. It is desired that the base would be water resistant as well as providing necessary water drainage in the event of rain collecting onto the portable garage.

In order to make the portable garage easy to move, the base 12 can be split into a plurality of sections 22. The sections can be hooked together with hooks 24 to provide a uniform base. The base can also be hinged at edges of each of the sections to enable the base to fold the base and allow a user to easily move the portable garage to an appropriate location. FIGS. 1 and 2 illustrate a base 12 that is split into three portable sections 22. The canopy 16 is supported by the telescoping frame structure 14, wherein on end of the frame structure is secured with a fastener 23 (FIG. 3) to the base. The canopy can be made from a variety of materials such as canvas, plastic, transparent plastic, nylon, vinyl, rubber, or plastic.

The telescoping frame is made of a plurality of U-shaped ribs that extend along the outer edges of the base. When the canopy is in a fully extended position, an access opening 26 is provided to allow a user to exit and enter the portable garage. The access opening 26 is created by making a slit in the side of the canopy. The slit can be opened and closed by a fastening structure such as a zipper, hook and loop fasteners, snaps, hooks, buttons, or any other suitable fastening structure. The drive mechanism 18 is positioned within the base 12 and is located along a horizontal central axis parallel to the flat surface of the base (FIGS. 3, 4 and 6).

A pair of rotating rods 28, 30 are operatively connected to the drive mechanism. The ends of the U-shaped frame are pivotally connected to opposing edges on one of the rotating rods 28. When the drive mechanism is powered, the rotating rods are turned thereby extending the telescoping frame

structure along with the canopy to open and closed positions thereby allowing a vehicle positioned on the base to be securely covered by the canopy. The drive mechanism can be powered through various different means including electricity. Utilizing electrical power, an electrical motor can be attached to the drive mechanism to open and close the canopy on the portable garage.

Various different drive mechanisms can be used to open and close the canopy, such drive mechanisms include a chain drive, a belt drive, and a screw drive. The drive mechanism can also be powered without electricity with the use of the force of a vehicle entering onto the base of the portable garage.

FIGS. 3 and 4 further illustrate the use of force from an entering vehicle. The drive mechanism is installed within a recess 32 in the base 12. The drive mechanism is covered with cover plates 34 over a portion of the recess 32 to allow a vehicle to drive over the drive mechanism and onto the base. To utilize the force of the entering vehicle, a vehicle engaging arm 36 is positioned on the drive mechanism along the base 12 of the portable garage. The engaging arm 36 extends upwardly from beyond the flat surface of the base at a height sufficient to engage a bumper or wheel of a vehicle. The engaging arm 36 is connected to a chain drive 38. The chain drive 38 rotates around a first gear 40 that is attached to the first rotating rod 30. The chain drive 38 rotates about a second pivot point 42 to allow the engaging arm to move back and forth along the drive mechanism. As the vehicle is driven onto the base 12, the engaging arm 36 is moved backwards laterally across a vertical central axis parallel to the flat surface of the base 12.

As the first gear 40 is turned due to the force of the vehicle on the engaging arm, the second rotating rod 28 is rotated in an opposite direction by a second gear 44 that is direct contact with the first gear 40. The rotation of the of the second rotating rod 28 opens the canopy structure by moving the frame structure to a fully extended position.

The engaging arm 36 is spring loaded with a spring 46 to enable the engaging arm 36 to move back to its original position when the vehicle is removed. Therefore, the lateral movement of the engaging arm 36 causes the chain drive 38 to turn the rotating rods 28, 30 thereby extending the telescoping frame structure 14 to a fully extended position. As the vehicle is moved away from the engaging arm the telescoping frame structure 14 and canopy 16 retract due to the spring loaded forces counter rotating the vehicle engaging arm 36.

A chain drive will provide excellent results. however, other drive mechanisms can also be used, such as a belt drive and a screw drive. Excellent results can be obtained when the telescoping frame structure and the canopy are designed to extend and retract in an accordion type fashion. The frame structure is can be designed such that each U-shapeframe member 14 will retracting in an orderly fashion. One such example is illustrated in FIGS. 3 and 4, wherein the first frame member is designed to be the largest frame member and is positioned along the outer edges of the base. The second frame member is slightly smaller than the first frame member and is adjacent to the inside of the first frame member.

Each of the following frame members continue to slightly decrease in size so that they lie adjacent to each other when the portable garage is in a fully retracted position. Once the portable garage is in a fully extended position, the canopy and/or frame structure can be locked to the base 12 to prohibit anyone from removing the vehicle from the portable garage.

FIGS. 1, 2, and 5 illustrate the use of a padlock 50 to lock the portable garage when in a fully extended position. A slotted plate 52 is attached to the last extended U-shaped frame 54 and telescopically engages a locking loop 56. A padlock 50 can then be locked onto locking loop 56 and thereby locking the portable garage in a fully extended position. Other security means, such as other type of locks, cables, or alarms can also be used to protect access to the portable garage as well as the portable garage itself. The slotted plate 52 can also be used to help retract the frame structure 14 in an orderly fashion to a fully retracted position.

The slotted plate 52 is designed to extend a predetermined distance beyond the end of the last U-shaped frame member so that it can make contact with the remaining frame members when the canopy is being retracted. Since the last U-shaped frame member is the smallest frame, the added length of the slotted plate 52 allows the slotted plate on the last frame member to make contact to the remaining frame members and help retract the frame members when the canopy is being retracted. The portable garage is not limited as to the type of vehicle that it can house. Referring to FIG.7. the portable garage 60 can be made to also accommodate other vehicles such as a motorcycle 62. The portable garage can also be sized to accommodate pick-up trucks, mini-vans, vans, trucks, and even bicycles.

Theory Involved

As various possible embodiments may be made in the above invention for use for different purposes and as various changes might be made in the embodiments and method above set forth, it is understood that all of the above matters here set forth or shown in the accompanying drawings are to be interpreted as illustrative and not in a limiting sense. We claim:

1. A portable, expandable protective vehicle cover comprising: a base, said base being sized to support a vehicle thereon and having a substantially flat upper surface; a canopy, said canopy being supported by a telescoping frame, said telescoping frame comprising a plurality of U-shaped ribs extending along outer edges of said base; and a drive means, said drive means comprising: a vehicle engaging arm, said vehicle engaging arm extending upwardly from the base at a height sufficient to engage a bumper of a vehicle, said drive means being positioned along a horizontal central axis parallel to the flat upper surface within said base, a rotating rod operatively connected to said drive means, ends of said telescoping frame being pivotally connected to opposing edges on said rotating rod, said plurality of U-shaped ribs designed to retract in an orderly sequence such that a first U-shaped rib member is designed to be larger than remaining U-shaped ribs, and each consecutive U-shaped rib member is slightly smaller than a previous U-shaped rib member so that the plurality of U-shaped ribs lie adjacent to each other in a relatively flat position, said drive means providing power to turn said rotating rod to extend and retract said telescoping frame to open and closed positions thereby opening and closing said canopy and allowing a vehicle positioned on the base to be covered by the canopy.

2. A portable, expandable protective vehicle cover according to claim 1, wherein said drive means comprises: a vehicle engaging arm, said vehicle engaging arm extending upwardly beyond said flat upper surface at a height sufficient to engage a bumper of a vehicle, said vehicle engaging arm being movable laterally across a vertical central axis parallel to the flat upper surface, said vehicle engaging arm being spring loaded, a chain drive connected to said vehicle engaging arm, said chain drive being operatively connected with said rotating rod, said vehicle engaging arm being movable backwards when engaged by a moving vehicle causing said chain drive to turn said rotating rod to extend said telescoping frame to a fully extended position, said vehicle when moved away from said vehicle engaging arm causing said telescoping frame to retract due to the spring loaded forces counter rotating the vehicle engaging arm.

3. A portable, expandable protective vehicle cover according to claim2, wherein said canopy is a flexible, lightweight, weather resistant material selected from the group consisting of: canvas, plastic, transparent plastic, nylon, vinyl, rubber and fabric.

4. A portable, expandable protective vehicle cover according to claim 2, wherein said vehicle cover further includes a locking means, said locking means allowing a user to lock said canopy when the canopy is in a fully extended position.

5. A portable, expandable protective vehicle cover according to claim 1, wherein said drive means is powered by an electrical motor.

6. A portable, expandable protective vehicle cover according to claim 1, wherein said drive means is a drive mechanism selected from the group consisting of: a chain drive, a screw drive, and a belt drive.

7. A portable, expandable protective vehicle cover according to claim 1, wherein said U-shaped ribs and said canopy open and close in an accordion type fashion.

8. A portable, expandable protective vehicle cover according to claim 1, wherein said canopy further includes an access opening along a side area on the canopy to allow a person to exit and enter said canopy when the canopy is in a fully extended position.

9. A portable, expandable protective vehicle cover according to claim 1, wherein said canopy is a flexible, lightweight, weather resistant material selected from the group consisting of: canvas, plastic, transparent plastic, nylon, vinyl, rubber and fabric.

10. A portable, expandable protective vehicle cover according to claim 1, wherein said vehicle cover further includes a locking means, said locking means allowing a user to lock said canopy when the canopy is in a fully extended position.

11. A portable, expandable protective vehicle canopy according to claim 1, wherein said vehicle canopy is sized to accommodate a vehicle selected from the group consist ing of: automobiles, motorcycles, pick-up trucks, mini-vans, vans, trucks, and bicycles.

12. In combination with a vehicle, a portable, expandable protective vehicle cover comprising :- a base, said base being sized to support a vehicle thereon and having a substantially flat upper surface; a canopy, said canopy being supported by a telescoping frame, said telescoping frame comprising a plurality of U-shaped ribs extending along outer edges of said base; and a drive means, said drive means being positioned along a horizontal central axis parallel to the flat upper surface within said base, a rotating rod operatively connected to said drive means, said drive means com prising: a vehicle engaging arm, said vehicle engaging arm extending upwardly beyond said flat upper surface at a height sufficient to engage a bumper of a vehicle, said vehicle engaging arm being movable laterally across a vertical central axis parallel to the flat upper surface said vehicle engaging arm being spring loaded, a chain drive connected to said vehicle engaging arm. said chain drive being operatively connected with said rotating rod, said vehicle engaging arm being movable backwards when engaged by a moving vehicle causing said chain drive to turn said rotating rod to extend said telescoping frame to a fully extended position, said vehicle when moved away from said vehicle engaging arm causing said telescoping frame to retract due to the spring loaded forces counter rotating the vehicle engaging arm, ends of said telescoping frame being pivotally connected to opposing edges on said rotating rod, said drive means providing power to turn said rotating rod to extend and retract said telescoping frame to open and closed

positions thereby opening and closing said canopy and allowing a vehicle positioned on the base to be covered by the canopy.

13. The combination of claim 12, wherein said drive means is powered by an electrical motor.

14. The combination of claim 12, wherein said U-shaped ribs and said canopy open and close in an accordion type fashion.

15. The combination of claim 12, wherein said canopy further includes an access opening along a side area on the canopy to allow a person to exit and enter said canopy when the canopy is in a fully extended position.

16. The combination of claim 12, wherein said canopy is a flexible, lightweight, weather resistant material selected from the group consisting of: canvas, plastic, transparent plastic, nylon, vinyl, rubber and fabric.

17. The combination of claim 12 wherein said vehicle cover further includes a locking means, said locking means allowing a user to lock said canopy when the canopy is in a fully extended position.

18. A portable, expandable protective cover assembly for a vehicle comprising: a base sized to accommodate said vehicle thereon; cover means attached to said base; and drive means for extending and retracting said cover means, said cover means for covering said vehicle when said cover means is in a fully extended position, said cover means for uncovering said vehicle when said cover means is in a fully retracted position, said drive means comprising: a vehicle engaging arm, said vehicle engaging arm extending upwardly from the base at a height sufficient to engage a bumper of a vehicle, said vehicle engaging arm being movable laterally across a vertical central axis parallel to the base, said vehicle engaging arm being movable back wards when engaged by a moving vehicle causing a drive mechanism to activate said cover means and to cover the vehicle, said vehicle engaging arm being movable forwards when disengaged by a moving vehicle cause said drive mechanism to activate said cover means and to uncover the vehicle.

19. A portable, expandable protective cover according to claim 18, wherein said cover means comprises: a canopy, said canopy being supported by a telescoping frame, said O telescoping frame comprising a plurality of U-shaped ribs extending along outer edges of said base.

Our Objective

PROVIDING SHELTER FROM EXTERNAL ELEMENTS

No matter the climate, Mother Nature can wreak havoc on any type of vehicle. From wind, snow, rain, and salt, a portable car garage will help minimize exposure to weather that can ruin your vehicle. Here are different threats to your automobile that a reliable portable car garage can help to prevent.

- **Wind:** If you live in an area prone to tornadoes or strong storms, you already know that wind can blow a tree limb and other debris onto your vehicle causing serious damage. When cars stay safely inside portable garages, you minimize the risk of this type of damage.
- **Snow:** When snowfall occurs on your vehicle, it's more than the pesky windshield scraping you have to contend with. The weight of snow can actually have a negative impact on your vehicle. It can cause denting and windshield cracking while the moisture can also lead to rust issues.
- **Rain:** That rain shower doesn't actually help to clean your vehicle. In fact, the rainwater evaporates and leaves a thin layer of pollutants that can cause exterior damage.
- **Salt:** Whether you live by the beach or in a snowy climate, chances are your car is prone to salt damage. Whether from salt by the ocean or salt on the roads in winter weather, salt can cause corrosion that can irreversibly damage a car.
- **Debris:** Environmental pests like sap and bugs can also create a problem for your car's paint job. When your vehicle is protected by a portable car garage, it can prevent debris from caking onto the paint.

PROTECT FROM SUN DAMAGE

Even if you store a vehicle in a milder climate, consistent sunlight can contribute to problems for the exterior and even the interior of your vehicle. Leaving a car in the heat means interior air temperatures of up to 145 degrees, which may lead to a faded dashboard and even damaged electrical components within your vehicle. Portable garages offer a safe place to shelter a car from harmful UV rays. Here are some other ways direct sunlight can damage your car or truck.

- **Cracked or peeled paint:** Sunlight can not only fade the paint and make your car look dull, it can even crack and peel causing you to pay for a whole new paint job.
- **Engine problems:** Harmful UV rays don't just harm the exterior of your vehicle. It can even cause problems with performance. Heat can create cracking in the tubing, hosing, and belts which can cause fluid leaks and even bigger engine trouble.
- **Upholstery breakdown:** Excess heat and sunlight can dry out your vehicle's upholstery, causing discoloration and breakdown. Both fabric and leather upholstery can fall prey to UV rays.

SAVE MONEY FROM BETTER INSURANCE RATES

There are several different factors a car insurance company will take into consideration when calculating a monthly premium. Aside from driving history and vehicle type, where you store a car is also high on that list. While carports can offer some protection, an enclosed garage is an even better bet. Don't expect to see a massive difference in your rates though. You can bet on a 5% decrease when your company calculates the premium. Why does an insurance company consider parking in portable garages safer?

- **Less collision risk:** When your car is parked in the street or outside of a garage, there's a higher likelihood a car or even a motorcycle can collide with the parked vehicle.
- **Protection from theft:** It's a lot tougher for a burglar to gain access to a car if it's behind lock and key.
- **Safer from storms:** Aside from a tree limb falling and cracking a windshield, your car is safer from hail damage and other types of rough weather when inside a portable car garage.

THEFT AND VANDALISM PREVENTION

A vehicle sitting out in a driveway unprotected can be a sitting duck for potential thieves and vandals. The National Insurance Crime Bureau estimated over 870,000 vehicles were stolen last year alone. Although more vehicles than ever have anti-theft software to prevent this type of crime, you can add an extra layer of security by storing a vehicle inside a portable garage. Here are other ways to minimize the threat of theft.

- **Choose lockable storage:** When deciding on portable garages for your property, investing in one with a locking mechanism just adds even more security, making it tougher for thieves to gain access.
- **Never leave valuables in your vehicle:** If for some reason the bad guys are able to gain access to your car, make sure there's nothing inside of any value. This includes your car's title.
- **Keep area well lit:** Potential burglars scope out easy targets, like dark areas where they may be able to get away without being seen. Add lighting to the area around your portable car garage to deter thieves.

OTHER BENEFITS PORTABLE GARAGES

Now that you've seen the many reasons why portable garages are an asset to any property, it's time to choose a perfect structure that fits your unique needs. Whether you need a garage with a smaller footprint, or a larger shelter with a little extra space for storage or hobbies, you'll be able to find a durable and cost-effective storage solution.

- **Quality construction:** portable garages are built to last, with rugged ripstop tough fabric choices that are UV treated, waterproof, and ready to stand up to the elements. These portable car garage options are constructed with high-quality steel frames with powder coated finishes that resist rust, chipping, and corrosion. Choose from wind and snow rated shelters to ensure your vehicle is better protected from wicked weather.
- **Simple assembly:** When comparing assembly to steel structures especially, the shelters take less time. If you have some DIY experience, there is no need to hire a professional to put most of these shelters together. While it is always smart to check your local ordinances to ensure

you won't need a building permit, structures generally do not require a permit for even more convenience.

- **Customizable options:** has multiple portable garage styles to fit your storage needs and budget. From larger options to fit multiple vehicles, to shelters with a smaller footprint, you'll be able to pick your own size perfect for your backyard. In addition, you'll be able to choose from different fabric strengths depending on the type of weather you expect at your property. With portable garages, you'll be able to customize everything right down to the colour, shape, and style of your shelter.

PROCEDURE

Portable garages aren't a one-size-fits-all type of investment. Rather, there is a wide array of models and designs that homeowners can choose from. One of the most fundamental features that can change the design of a portable garage is the material it's made from.

Fabric Types

Fabric portable garages don't refer to the same fabric in your clothes. Rather, these are made of materials such as polyethylene or sturdy canvas. These are strong enough not to tear easily under pressure or collapse under a heavy weight load. They also work well at keeping moisture out and are often less expensive than more heavy-duty materials.

That being said, there are some comparative downfalls. For example, materials like steel and aluminum are consistently stronger and more stable than fabric covers because they're more rigid than their fabric counterparts.

Steel

Steel is a well-known material for being one of the strongest commonly used materials in construction. It isn't likely to get damaged even in tough conditions and it'll last a long time. This material also doesn't require a high level of maintenance to keep it in top condition over time.

When left untreated, steel does have the downfall of a predisposition for corrosion and rust but certain treatments can help. Steel isn't well-known for being the most aesthetically pleasing material to use thanks to it's distinct and sometimes industrial appearance.

Aluminum

Aluminum sheds have a lot of the same benefits as steel sheds but it also includes a few key differences. For one, it is naturally resistant to rust and corrosion. This makes it slightly easier to maintain in wet conditions than steel.

A feature that has both pros and cons is the lightweight design of aluminum. This makes it easy to use but it also makes aluminum more malleable than steel. So, if you have to use the garage in harsh weather such as hale, you're more likely to see signs of damage.

Wood

The appearance of a wood portable garage is one of its biggest advantages. Wood can be designed in a number of different ways and the different types of wood used can alter the appearance of portable garages or any carpentry product.

You will want to carefully maintain wood. The biggest concern to worry about is treating the wood for pests. An infestation of carpenter ants or termites can spell the beginning of the end for a wood structure.

Most Popular Size for Portable Garage

When you're planning on purchasing or building a portable garage, you'll need to consider how much room you have and how much room you need. As mentioned earlier, they're often defined as single, two, or three-car sizes. However, the exact measurements are important when determining the space you need as well.

A standard, single portable garage measures 12 feet wide by 20 feet long with a 9 foot wide doorway. Larger garages are 18 feet wide which is enough for most types of vehicles. For a two-car portable garage, this width

extends up to 24 feet but an additional 6 feet is a good idea if you need additional storage space. Triple portable garages are 26 to 30 feet wide and offer the most space. Read more about the standard garage door dimensions here.

Anchoring a Portable Garage

Portable garages don't simply sit on the ground with nothing tethering them in place. Instead, they have to be anchored into place. This ensures that it doesn't fall or shift even when the weather gets rough.

The first thing to do to ensure you secure your portable garage correctly is to check the manufacturer's instructions. Beyond that, you can invest in additional anchors made for portable garages. You can simply affix the anchor into place, much like when you pitch a tent. Even once these anchors are installed, it doesn't take away from the portability of the garage since they can be removed whenever needed.

Portable Garage Floor

While many full portable garages, as compared to carports, have walls as well as an overhead shelter. However, not all of them have a built-in floor with them.

Portable garages with floors do come with a few essential benefits. The biggest advantage is an additional level of protection. If you have a garage floor, you're less likely to suffer a wet surface to base the garage after harsh weather. While this might not be essential if you're only storing your vehicle, but it can be extremely helpful if you're storing other items like boxes in the portable garage.

Ground Anchors/Weights

We've already covered that portable garages and carports can't be left untethered once it's set up. Without being properly grounded, the garage is likely to shift out of place. This is especially true when you're using the garage in rough weather conditions.

This is what ground anchors and weights are for. These tools are here to ensure that your portable garage is safely secure but they don't add a level of permanence to the use of the garage. When you're ready to move or store the garage, these weights and anchors can be removed and replaced. Ground anchors often are made of galvanized steel for protection from the outdoor environment with wire and clamps to secure the roof of the structure.

Electricity Hook-ups

By nature, portable garages are simple. This makes them easy to set up and take down when you're ready and it keeps storage stress-free. Yet, this doesn't mean that you have to live without extra amenities in your portable garage if you're interested in them.

An accessory such as electrical hookups which, of course, allow you to add electricity to your portable garage, will help you add these amenities. This can be particularly helpful if you plan to work in the garage so that you can add lights for added visibility.

For Example; the portable garage for keeping

While full car-sized garages fit the needs of most drivers, they can be an unnecessarily large structure for motorcycle owners. After all, these homeowners don't need as much space to store and protect their vehicles.

This is why specialized portable motorcycle garages are so important. They don't require the same width to protect the motorcycle, so this can save you space in your driveway or yard. By most recommendations, motorcycle owners will want a storage space of at least 6′ x 8′ to comfortably keep the motorcycle out of the weather.

One of the best choices you have when it comes to portable garages is the Abba Patio Storage Shelter. It comes in four sizes including measurements of 6' x 8', 7' x 12', 8' x 14', and 10' x 10'. With this many options, you have plenty of options to help you find the size that you need personally.

The garage is made with a 1 ½-inch powder-coated steel frame and a polyethylene cover. This keeps the garage safe from rust, corrosion, and UV fade as well as protects your car and belongings from any unfortunate weather. It's also made to be easy to set up, collapse, transport, and store which makes it truly portable.

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Conclusion

It has been widely assumed that the chief obstacle to the preservation of early garages has been obsolescence brought about by increased size requirements during the mid-twentieth century. However, it is probable that the low preservation rate of small early garages is due less to their ability to house larger cars then it is to the relative impermanence of the buildings, which were often built inexpensively of simple wood frames and without foundations, pedestrian doors, or sources of natural light. Garages have open and flexible plans by nature, and when they are no longer practical storage structures, adaptive use is an extremely valuable tool to encourage their continued viability and preservation.

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